

- Describe methods of passing parameters to a procedures
- DEFAULT Option for parameters
- Invoking Procedure from Anonymous Block
- Invoking Procedure from another Procedure
- Handled and Unhandled Exceptions
- Removing Procedures



Methods for Passing Parameters

Positional: List actual parameters in the same order as formal parameters.

Named: List actual parameters in arbitrary order by associating each with its corresponding formal parameter.

Combination: List some of the actual parameters as positional and some as named.



DEFAULT Option for Parameters

```
CREATE OR REPLACE PROCEDURE add_dept
   (p_name IN dept.dname%TYPE
  DEFAULT 'unknown',
  p_loc IN dept.loc%TYPE DEFAULT 1700)
IS
BEGIN
  INSERT INTO dept(deptno,dname, loc)
  VALUES (dept_seq.NEXTVAL, p_name,
  p_loc);
END add_dept;
```



Examples of Passing Parameters

```
BEGIN
add_dept;
add_dept ('TRAINING', 2500);
add_dept (p_loc => 2400, p_name
  =>'EDUCATION');
add_dept ( p_loc => 1200);
END;
SELECT deptno, dname, loc
FROM dept;
```



Declaring Subprograms

```
CREATE OR REPLACE PROCEDURE leave_emp2
(p_id IN emp.empno%TYPE)
IS
  PROCEDURE log_exec
  IS
  BEGIN
     INSERT INTO log_table (user_id, log_date)
     VALUES (USER, SYSDATE);
  END log_exec;
BEGIN
  DELETE FROM emp
  WHERE empno = p_id;
  log_exec;
END leave_emp2;
```



Invoking a Procedure from an Anonymous Block

```
DECLARE
  v id NUMBER := 163;
BEGIN
  raise_salary(v_id); --invoke procedure
  COMMIT;
END;
```

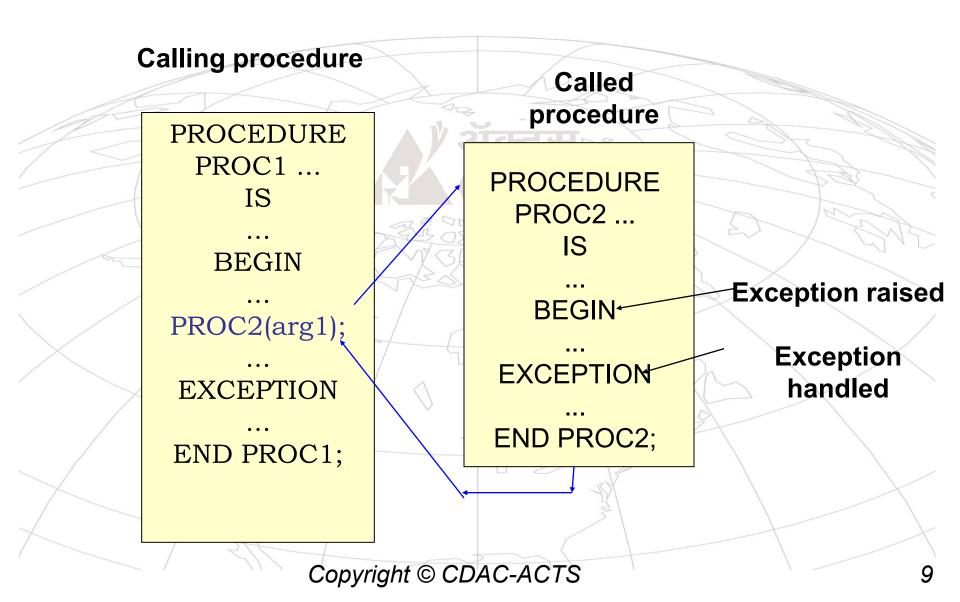


Invoking a Procedure from Another Procedure

```
CREATE OR REPLACE PROCEDURE
  process_emps
IS
  CURSOR emp_cursor IS
  SELECT empno
  FROM emp;
BEGIN
 FOR emp_rec IN emp_cursor
  LOOP
    raise_salary(emp_rec.empno);
  END LOOP;
  COMMIT;
END process_emps;
```

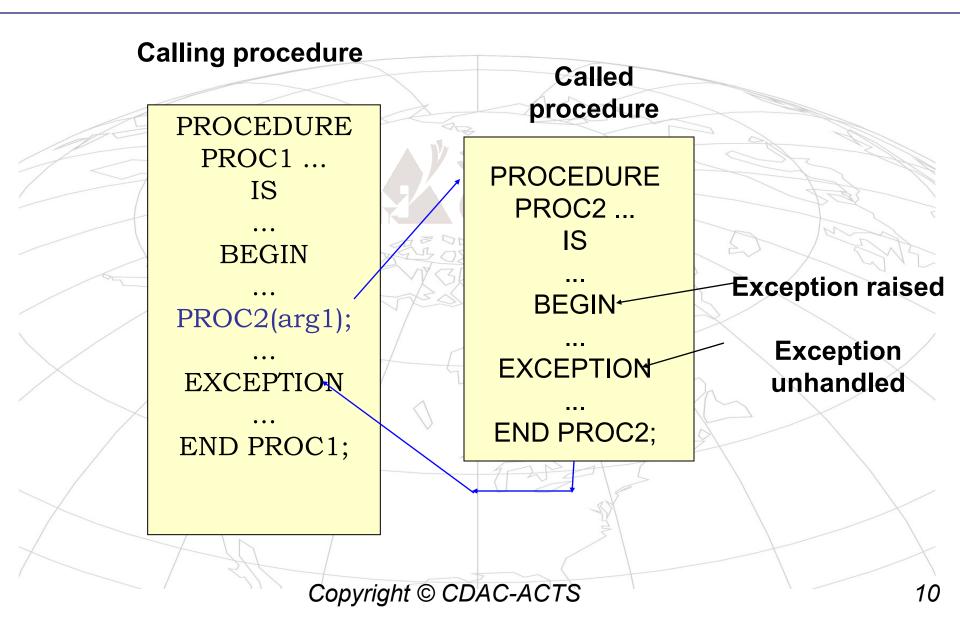


Handled Exceptions





Unhandled Exceptions





Removing Procedures

Drop a procedure stored in the database.

Syntax:

DROP PROCEDURE procedure_name

Example

DROP PROCEDURE raise_salary;



Summary

- Parameters can be passed by three methods as Named, Positional and a combination of both.
- Procedure can contain another procedure as a local sub program.
- You should be aware of the effect of handled and unhandled exceptions on transactions and calling procedures.
- You can remove procedures from the database by using the DROP PROCEDURE command.



